

# Seasonal Dimensions of Rural – Urban Interaction: A Study of Consumption Linkages in the North Central Dry Zone Villages in Sri Lanka

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## Abstract

In rural societies a close relationship exists between rural – urban consumption linkages and the cultivation seasons. Rural – Urban linkages are strong during times of prosperity after harvest, but during periods of hardship, seasonal poverty compels farmers to purchase essential provisions on credit from village entrepreneurs. This is close to the situation prevailing among farm households in the North Central Dry Zone of Sri Lanka. The harvesting period of the main agricultural season in March and April coincides with the New Year festivities. Hence, consumption links with urban centres are stronger during variety of better quality goods at competitive prices, while weekly markets or 'polas' at these centres attract a large number of traders and consumers. During the rest of the year, except for two minor periods with strong rural – urban linkages, the majority of the farmers depend on village traders who supply daily provisions, agricultural inputs and other requirements on credit. The objective of this study is to account for the changes in the consumption linkages; examine the extent to which land ownership, wealth and regular monthly wages earned in urban areas contribute to differences in consumption linkages; assess the role of the village traders and suggest suitable recommendations to strengthen beneficial linkages with urban centres. Primary data for this study is based on fieldwork conducted in three urban centres and nine villages in their hinterlands. There is a close relation between inputs for the agricultural sector and the marketed outputs. As the same time, the farmers are bound to sell their outputs to the person who can deliver the inputs, especially when the inputs are credits.

**Keywords:** Consumption Linkages, Seasonal Dimension, Urban - Rural Interaction, Marketing links, Hinterland

## I. INTRODUCTION

The functions markets are often not clearly distinguished; at lower levels of development they are often combined to different degrees in trading enterprises. The specific role of a market centre can be defined by an analysis of the functions performed within the overall context of the agricultural and food marketing system and the linkages of the various enterprises and Consumers. Agricultural produce passes through different channels and different types of market centres on its way from producer to consumer (Kaynak, 1986).

In economic terms three types of rural – urban linkages are usually distinguished: consumption linkages, production linkages and financial linkages. This study highlights consumption linkages in terms of expenditures on urban goods and selected social services. The hinterlands have also shown limited marketing linkages in the sale of rural products to the urban centres. Most of the expected linkages such as agricultural inputs, financial and other social service related linkages between the hinterlands and the urban centre do not exist. Some of the poorest areas may have little more than consumption linkages.

Rural – urban linkages are an essential tool for regional development. They can however also be negative, increasing social stratification and landlessness. At present, the land scarcity is a rapidly growing problem in the North Central Province. This is mainly due to population increase, fragmentation of land, low level of marketable surplus, low income of farmers etc. In addition, income inequality, seasonal variation of labour utilization and income, lack of institutional credit regard for agriculture, out flow of resources from the villages also exist (Peiris, 1996). Due to all these factors, farmers frequently become indebted, hence entering a negative spiral that often ends in the loss of land. Access to agricultural land is related to a certain nexus of rural – urban linkages. These linkages are mostly related to input – output flows. This paper focuses on the linkages of three different types of settlements in the NCP.

## II. STUDY AREA

The North Central Province is the largest province and it is situated in the Dry Zone of Sri Lanka (16% of the total land area – 10472 km<sup>2</sup>). It is a predominantly agricultural region based on major irrigation schemes and traditional tanks. North Central Province has a tropical monsoon climate with a highly variable bimodal rainfall pattern. The inter-monsoonal period between October and December provides the most reliable rain for crop production (Maha Season) and irrigation water collection. The

North - East monsoon from the end of December to early March is generally a rainy period. The inter-monsoonal period from March to early May provides rainfall for the shorter Yala cropping season, but the total rainfall and distribution pattern are highly variable. The South-West monsoon from May to September brings little rain. Mean monthly temperature is in the range of 25 - 29C, with the minimum temperature occurring in November - March, but not at a level low enough to restrict plant growth.

The high overall land - man ratio, the province is largely rural with two districts in which an estimated 3742 villages and 44 service centres spread over 29 Divisional Secretariat areas (6 in Polonnaruwa and 23 in Anuradhapura) comprise in two districts. Of the total area, 60% is estimated to be arable, but only about 450,000 ha of land are utilized for paddy and highland cultivation. The overall land area of the NCP comprises of 1051,180 ha and 68.6 percent out of it belongs to the Anuradhapura district. From the total land area 23 percent is used for cultivation purposes, 31 percent forests, 39 percent unused land and the balance 7 percent forms inland water bodies. Of the total cultivated land area 65 percent is used for paddy cultivation, 30 percent forms the homesteads and the rest 5 percent is used for growing mixed crops. From the total land area of the NCP roughly 1.0 percent remains as build up areas. The province has an abundance of surface water storage in the 26 major, 80 medium and 2550 minor tanks, which currently supply water mainly for irrigation and domestic use and to a limited extent for inland fishing. There is an abundance of open forests and natural grasslands for the rearing of livestock.

The total population in the NCP was 1105,663 in 2001 and the population density remained at 115 per km<sup>2</sup>, which is low when compared to the national average of 342 persons/km<sup>2</sup>. Eighty four percent of the population depends on agriculture for their livelihood and 92 percent of the population lives in rural areas. Over 70% of the population in the province depends on farming for their livelihood, but the contribution of the province to the national GDP is estimated at 4.2%, largely due to the subsistence nature of agriculture practiced in the province. With an average family of about 5.2, information indicates that the highest poverty level (39%) is in the province where an estimated 52% of the populations are beneficiaries of the Samurdhi program (District Resource Profiles 2001).

The urban settlements belong to five orders according to the classification adopted by the Urban Development Authority (UDA) regional office in the NCP based on the centrality index. In addition, there are three major rural settlement types in the NCP, the traditional (purana) villages, the colonization schemes and the recently established Mahaweli Settlements. Five industrial estates and 19 garment factories are operated under the 200 Garment Factory Program and (GFP) 5328 registered industries under the regional administration office.

#### **A. Consumption Linkage between Urban Centers and The Hinterland**

The market system based on five different and interacting channels. That is the village shop, the periodic markets, the urban centres, the dedicated economic centres and mobile vendors. The amount of the types of the goods the important to sell where is with the seasons in the agriculture. This is due to both variation in farmers economy and varying demands in goods and inputs in the agriculture.

The marketing of goods are creating essential linkages for the development of the urban and rural areas. Agricultural inputs mainly concentrated in urban centres in the province with connecting other main urban centres in the country and distribute to village entrepreneurs. The outputs of the agriculture are flows passing various channels through different levels of entrepreneurs in the area. These two types of marketing systems and other consumer goods are generates valuable links in rural - urban, urban - urban, urban - outside area and rural to outside areas bypassing urban centres in the province. These linkages are directly affected development of the agricultural region.

The linkages connected to two main sectors were studied. The flow of goods and services to the urban centres and the flow of goods and services to the hinterland are the important aspects. In addition, the links which emerged when obtaining goods and services to the hinterland were also identified.

#### **B. Inflows of Goods and Services**

There are two types of interactions viz; inflows and outflows of the goods and commodities. Collecting of goods occurred through four identified areas and it has generated some dynamism that strengthens the continuous network of links. The infrastructure and the functions of urban centres generate explicit relationship between surrounding areas. Such relationships are very important in the process of development. At the same time, relationships are generated due to the flow of goods and services (that are centralized to the urban centres), from the urban centres to the periphery. The identification of, how the hinterland behaves on the special condition of the urban centres and how the provisions of services are supplied are important. In this process the flow of hinterland products to the urban centres and the flow of urban centres to the hinterland occurred. The relationships that exist in specially identified areas important. All those linkages based on seasonal variations of farmer's income and their strength of consumption. Most of the times per the year, farmers get their needs on credit as a result of seasonal or lower income.

According to the seasonal variation of income generated of the area, the commodity flows of urban centres are very important in generating links between both urban and rural sectors. These types of commodity flows can be seen in every urban centre in the NCP. Following table shows approximately 35 percent of inflows to the selected small towns are from the district capital of Anuradhapura and another 30 percent comes from the core region or the Colombo Metropolitan Region. Twenty three percent (23%) is from the main towns in the surrounding areas. The remaining twelve percent (12%), which comes in the forms of agricultural produces and small-scale non-farm products are from the neighboring villages.

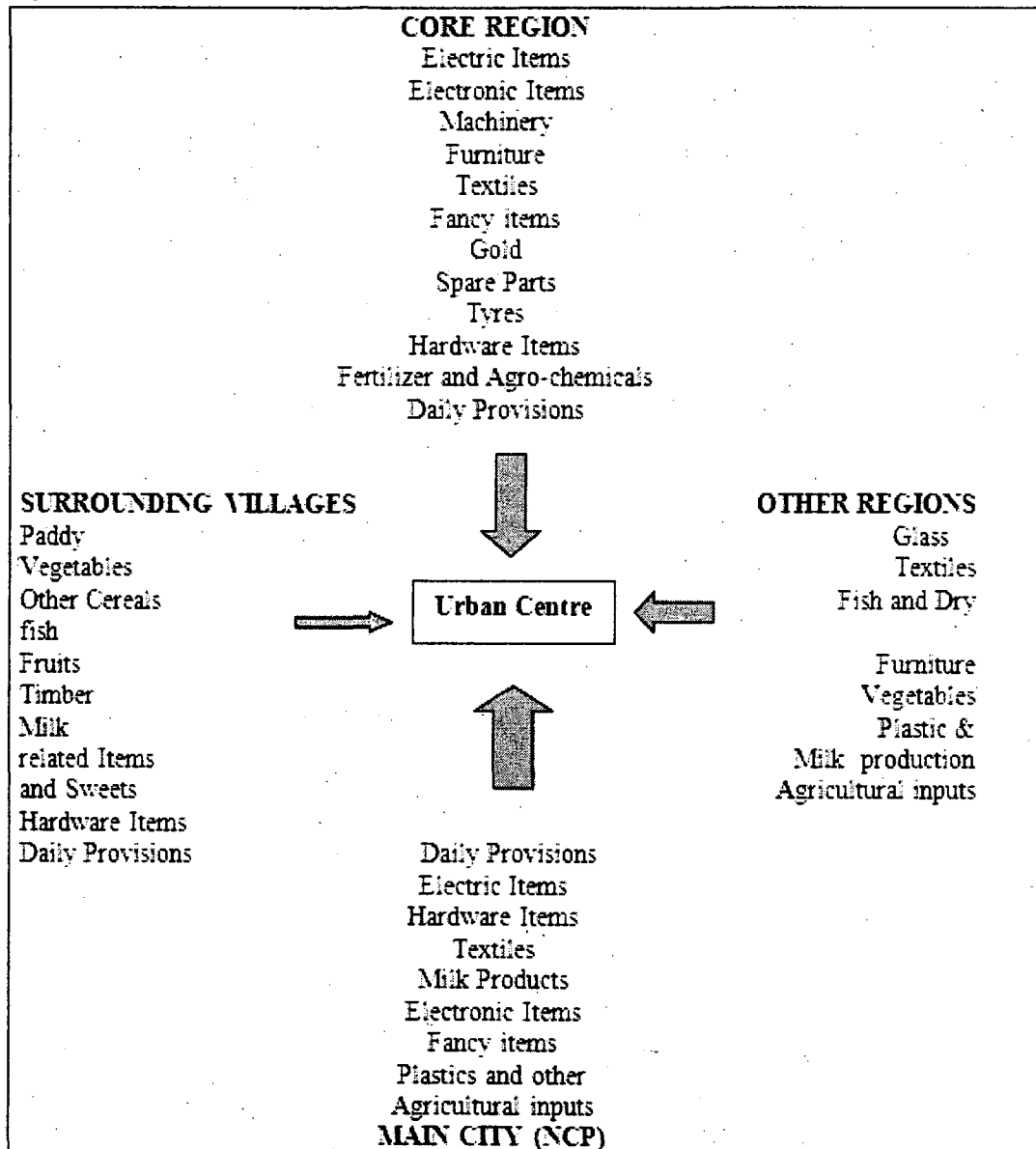
1) Provision of Goods and Commodities by Source

Main Area	Percentage			
	Thambuttegama	Kahatagasdigiliva	Higurakgoda	Average
Core Region (CMR)	27	21	42	30
Main City (NCP)	31	53	20	35
Outside the NCP and CMR	27	15	28	23
Neighbouring Villages	15	11	10	12

Source: Field Survey, 2000/2001

According to the urban centres taken into study, there is no considerable difference in case of amounts of goods and some of the goods differ in 3 small towns

C. Inflow of Good and Services



Source: Field Survey, 2000/2001

The demand for the goods and services of the NCP has seasonal variations. For example, after harvest, more than 90 percent of the farmers purchase high quality and expensive electronic items, jewellery, furniture, machinery, and vehicles (motor cycles, bicycles and tractors etc.). During the cultivation period, there is a greater demand for agricultural inputs and spair parts for tractors. During inter seasonal period and the period after sowing or planting until harvest, there is a great demand for building materials for building or repairing the houses.

There are a number of pawning centres engaged in the service, in addition to the services of the banking institutions, to pawn their jewellery, electronic items etc. During this period, when capital is scarce, the farmers generally prawn their vehicles and

even mortgage their land. On the other hand they need money even for their consumption, after sowing or planting until harvesting. As such, pawning transactions are important during that period too. After harvesting, farmers redeem their property from the pawning centres and if they can afford some farmers purchase new vehicles or other expensive goods.

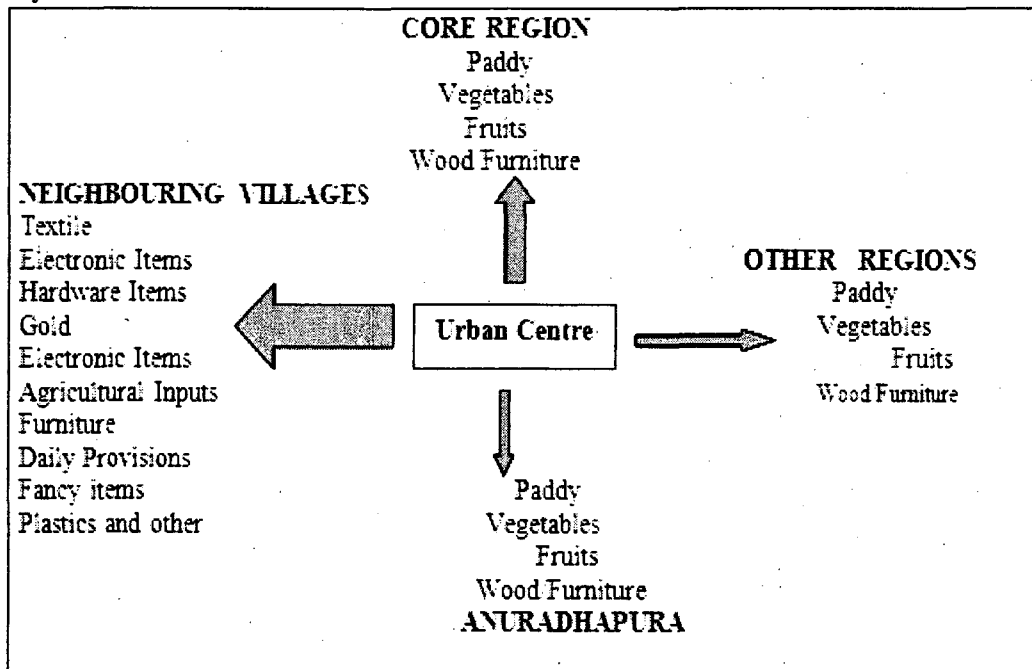
Although, there is a large-scale paddy production in the area a large amount of paddy goes out of the region as raw materials. During the off-season, the paddy produced outside the area, come back to the area in the form of rice. Further, some other varieties of locally produced rice and imported rice are available. Compared to other seasons, rice has a greater demand during the off-season (Ratnayake et al, 2002).

According to the figure, a small part of the items and other foodstuffs like fish, dry fish, etc. come from the other regions. While a considerable portion of fish and dry fish consumed in this area are supplied by the local fishing industry, the balance comes from the eastern and the western parts of the Northwestern province. Local vegetables and fruits are collected from the surrounding areas where wholesale dealers bring the 'up country' vegetables. Most of the requirements of the small urban centres of the NCP are acquired from the Anuradhapura city itself.

#### D. Outflows of the Area

While studying the nature of the outflow of urban goods it becomes clear that various amounts of the same item are sent to the core region, to other regions and to the main city of Anuradhapura. The main commodity is paddy. Major part of the paddy production flows to Gampaha and Kurunegala districts and they receive a considerable amount of this outflow. Vegetables, fruits and wood are the other items which flow out of the region in addition to the above mentioned ones.

#### E. Out flow of Urban Centre



Source: Field Survey, 2000/2001

There is seasonality in the supply of goods and services to the hinterland areas. The special features of these service centres is providing agricultural inputs and daily provisions to small junction service centres and village service centres; in addition, during specific periods there is a huge demand for luxury, semi-luxury and hardware items. The demand for various items at various times depends on the income of the farmers. Farmers get their income only twice a year at the end of the Yala and the Maha seasons and with that money they are tempted to buy many high-priced items such as jewellery, textiles, wooden and plastic furniture and hardware items. During the two main seasons there is a big demand for agricultural inputs.

These purchases are based on the transitory position of the growth cycle of their crops. During the period of cultivation farmers have to invest much money. If they do not have sufficient money at the time, they will satisfy their needs by pawning their valuables and thus get the required money.

#### F. Changing pattern of Consumption

After harvest or during the sowing to harvesting period many farmers either start building new houses or complete the ones that are half built. This type of construction depends on their income and it builds up a demand for hardware items. Farmers get their lowest income nearly two months after reaping the harvest and during the period between sowing and harvesting. Farmers face hardships during these periods and they actually become the poorest of the poor. This is the seasonal poverty in the NCP. During this period the poorest farmers either sell or pawn the valuable items, which they had earlier purchased, in order to survive. Some

farmers even mortgage their paddy land. During this period the farmers use the urban centre as they purchase only the minimum quantity of their daily provisions. At the same time the income of the entrepreneurs of the urban centres declines a lot. The other problem faced by these entrepreneurs is their tendency to purchase their needs on credit. According to a sample survey more than 90 percent of entrepreneurs in all types of urban centres mentioned that they have to live with such a "seasonal income". As a result of that, 90 percent of the farmers in the sample mentioned that seasonal poverty makes them face many hardships. Vendors start when the demand for their goods is very high during these three periods.

1) *Periods during which Sales Increase*

Period	As a Percentage of Traders' Responses		
	Thambuttegama	Higurakgoda	Kahatagasdigiya
March – April (New year and end of Maha)	72	68	71
August (End of Yala)	4	23	3
November – Dec (Beginning of Maha season and chena)	32	22	23
Other periods (Pola days etc.)	4	8	3

Source: Field survey, 2000//2001

Out of these periods is more significant. Roughly about 70% of vendors in the urban centres have clearly identified the months of March and April as the period having the highest turnover. Even though farmers reaped the Yala harvest in August, the vendors did not experience any significant increase in their sales, because the farmers of these hinterland areas did not earn a good income during this season. However, the farmers in the colonization schemes received a higher income during the Yala season. In those urban centres the vendors got their second best income of the year. The next period when they experienced an increase in their income was in the November - December period. Almost all the vendors of the NCP agreed that the November - December period could be taken as the period when the main agricultural activities began. Therefore the farmers needed more provisions and agricultural inputs at hand. So during that period vendors in all types of urban centres experience a high turnover. Table clearly shows that there was not much of a difference between the figures for the various types of urban centres. During the rest of the year no significant changes were to be noticed in the sales of the urban centres and this showed that it depends on the income levels of the farmers. The differences of income levels, which thus existed in the hinterlands, directly affected the trade in the urban centres and the relevant figures.

2) *Reason for the Increase in Sales*

Reason	Percentage		
	Thambuttegama	Higurakgoda	Kahatagasdigiya
End of Maha and Festival Season	52	80	71
End of Yala Harvest	26	23	22
High demand of Inputs in cultivation seasons	10	5	3
Rest period	-	22	12

Source: Field survey, 2000//2001

This table clearly shows that during the immediate post-harvest season the sales in the urban centres remained at a high level and depending on the demand of the merchandise a difference between the various urban centres was evident.

Table shows the difference in sales of merchandise, which had a big demand. According to this table items like jewellery, furniture and electronic goods had a high demand. All the urban centres are at the same level. However, these flows depended on the availability of access. The main role of the urban centres is the supply of services to the hinterlands. The most important factor was the availability of access roads from the hinterlands to the urban centres and other infrastructure facilities. These facilities enabled direct links to exist between the hinterlands and the urban centres. Specially the transport facilities and the associated road networks contributed towards the development of the rural people.

3) *Items Purchased During Periods of High Demand*

Item	Perspective of Traders		
	Thambuttegama	Higurakgoda	Kahatagasdigiya
Jewellery	45	36	21
Textile and garments	12	10	36
Furniture and Electronic Items	28	24	26
Daily Provisions	10	20	14
Spare parts and vehicles	5	10	3

Source: Field survey, 2000//2001

**G. Interaction based on Periodic Market**

The periodic market or weekly market (Pola) is a very suitable place for obtaining essential goods and for marketing agricultural products and managed to their low income all over the year. There are factors to indicate that this Pola system had existed since 1930s, for the farmers to sell their produce at a reasonable price and to purchase the essential goods at a cheaper rate. Unlike at present, those days there were no urban service centres spread all over; the most successful means of purchasing daily needs was the Pola. The special features in this were that the vendors, who usually arrive one day ahead of the Pola with their merchandise in bullock carts, engage in business at the Pola and return home only after visiting several other Polas in the neighborhood. With

the gradual growth of the Pola, which was conducted in this manner, a few permanent boutiques were also established in the locality of the Pola.

Parallel to these service centres, which thus got established, and grew, the pola also grew and later many such small centres in which the market was located developed rural service centres. Even though, some junction service centres were not recognized as urban centres, according to the urban criteria, it was conceptually a strong reality that the people of the hinterland considered them to be urban centres. Currently there are 44 service centres in the NCP and it is recognized as several hierarchical orders.

Some of the new service centres were established because of the increase in population brought about by the colonization schemes and the new Mahaweli settlements. The MDP had promoted many service centres, which were so far functioning as very small ones, and some other service centres also have been newly established. In each of these service centres a pola was held and in some rural service centres and in the centres of some old colonization schemes, small pola's were regularly held. It is important, that after the establishment of such new settlements, some pola's were established to cater to the needs of the people living in the hinterland.

According to Karunanake et al (2003) the periodic market is also important to look at the type of producer, assembler, retailer, wholesaler and consumer relationships that the several commodity flows entail. In (a) above the commodity flows would involve direct producer-consumer relationships or wholesaler-retailer and retailer consumer relationships. In type (b) the commodity flows would primarily be characterized by wholesaler-retailer relationships. Given this situation the pola at times acts as a break of bulk point from where retailers who buy from wholesalers would dispatch items albeit in smaller quantities to outside regions. The commodities would involve industrial or manufactured items as well as food items collected from outside areas through the assembler-transporter-wholesaler network. Type (c) commodity flows would be determined by wholesaler-retailer-consumer transactions or retailer-consumer transactions. In the latter case the retailer may have obtained his goods for sale from outside quite independent of the wholesaler.

In whatever manner they may have started it, the weekly pola is considered important as the main centre where people living in the hinterlands gather on a certain date. At the same time the pola is the most efficient service centre which has reached its optimum. The dynamism of the service centres is important in different aspects. Before six years the pola had been one of the centres where the farmers' produce was collected. The wholesale market was held early in the morning and goods were delivered up to a large hinterland outside this region. Brokers and collectors collected the farmers' produce before the day of the pola and sold them to the wholesale traders who came on the following day and the interaction built on this became a great help for the development work of the area at that time. But because of the Dambulla Dedicated Economic Centre (DDEC) established in 1998, the importance concerning the distribution of agricultural produce took different directions.

A recent development of considerable importance to the functioning of rural periodic markets in parts of Central and North Central Sri Lanka is the setting-up of Dedicated Economic Centres (DECs) whose primary objective is to establish direct producer wholesaler links. Through this process it is expected to ensure higher prices to the producer by eliminating the middlemen from the marketing chain. Indeed Ratnayake et al. (2001) finds that with the establishment of the Dambulla Dedicated Economic Centre (DDEC) the role of intermediaries in the marketing of agricultural produce has considerably declined in the region. It is claimed that the farmer-producers have become the largest group of suppliers to the DDEC in terms of numbers although in terms of quantities sold collectors and traders still account for 63 percent of the supply. One particular advantage that the DDEC offers to the farmer-producer is that it is kept open for twenty four hours a day (Karunanayake et al, 2003).

The regular flow of farm produce to the DDEC was enabled by the development of the road network, which was constructed due to the MDP. This was possible due to the increase in the numbers of vehicles used for transporting farmers' produces, the ability to market their produce on whatever date of the week and the possibility of marketing their produces even late at night. A road network suitable for such conditions was gradually established. This created a large number of business opportunities as well as job opportunities. With this the farmers got oriented towards a large market for their produce. The transformation of the marketing system which had thus taken place was actually the real cause which led to the gradual elimination of the wholesale trade. As the farmers got motivated to follow a new direction and a new mode instead, of the old relationships, the pola so far existed was replaced by new interactions. Most of these were instrumental in bringing about a fast rate of development in the agricultural and the socio- economic fields (Ratnayake et al 2002).

It is important that the activities of the weekly pola which is held in association with the service centres of the NCP, is maintained in such a way that all the people of the area can get its benefits. A pola is held daily and it functions as a "pola circuit". Around the pola which provides services up to a radius of about 10 kms, there was a main pola circuit and several minor-pola circuits.

#### ***H. Linkages between pola (periodic market) and the urban centre***

The day of the pola is the day in which the service centre has the highest sale for that week, as on that day people from the hinterlands come to the urban centre for different purposes. The customers who come to the pola with the sole intention of purchasing fresh vegetables and fruits at low prices also get many other jobs done in the same trip. These include for example grinding of spices, extracting of coconut oil, hair dressing and tailoring, administrative services and various other requirements from the urban centre. On that particular day, everybody who provides some service at the urban centre can get a very good income and if any urban centre didn't have its own weekly pola, then people would not be able to earn such money. To express

this very simply, on the pola day business of all ranks from the lowest vendor up to the branches of the multi national companies can be seen good sale. This leads to the hinterland development and consequently to the development of the region as a whole.

### ***I. The linkages between pola and the hinterland***

The hinterland of the pola is of two types.

#### ***1) Traders hinterland 2. Consumers hinterland***

When considering the traders' hinterland what becomes very important is the fact that more the 90 percent of the vendors in the pola are from the neighboring areas and even from among the outsiders, the majority comprises of people who come from villages in the nearby regions.

A few categories of people who were earlier engaged in agriculture subsequently changed over to trade. The other main reason is that there is a good demand for non-agricultural goods brought from outside into the urban centres. Another advantage is the availability in the urban centre of some agricultural products at a bargaining price. Especially the vegetable and fruit traders of the urban centre can buy their needs from the wholesale traders from Dambulla who conducted their business early in the morning. At the same time they can also purchase (their needs without transport cost also) the remaining unsold vegetables and fruits at a very low price. This is a very profitable situation for canteens, restaurants and hotels etc.

The interaction which thus exists between urban centres and the pola is an activity which leads to the growth of the urban centre (as an additional source of income). Those who took to trading due to lack of lands and the people who had an experience in trade are recognizable. The traders' hinterland covers a radius of about 20 km from the pola. The other important factors are the preparation of the merchandize by some vendors (employing family labour), and the participation of traders in between 2 - 6 polas in the immediate neighborhood. Another section of vendors comes early in the morning to purchase items like vegetables, fruits, arecanut, betel etc. from the Lorries of the wholesale dealers and subsequently sell them at the pola. The advantages of selling in the pola are the following.

- 1) Except for the charges of the pola they do not have to incur any other additional expenses.
- 2) They can be confident of a good daily turnover.

However, most of the Dry Zone village farmers are depends on village entrepreneurs' credit system. The seasonal dimensions of the Rural - Urban interactions and consumption links are based on factors as below,

- Farmers mainly cultivate two seasons.
- Maha is most successful season compared to Yala
- Most of the farmers usually get agricultural inputs and daily needs on credit basis mainly from village shopkeepers during the cultivating periods.
- At first most of the farmers sell their product to the village shopkeepers and settle their debt.
- End of every Maha season large amount of money spend for expensive durable items (Gold, Electronic Items etc.).
- In the beginning of the cultivation seasons most of the expensive items and some of the land are mortgage for their monetary requirement.
- All of the urban centres are fully active and function mainly twice a time per year.
- The periodic market is a better place for get day to day needs in lower price.
- The sales increase in periodic market can be seen twice a time per year.
- The consumption pattern mainly depends on the Agricultural income.
- The farmers who get remittances from outside are better survive in agriculture.

### **III. CONCLUSION**

Farmers in all types of villages in the NCP are debtors to village shopkeepers or town traders for providing their agricultural inputs and daily provisions during cultivation periods.

A lot of farmers settled their debt immediately after giving their harvest to shopkeepers.

The presence of people with such extra-incomes within farmer families was a big potential for their agricultural activities. These families were able to advance cultivation patterns and methods and also improve their marketing.

There is a close relation between inputs for the agricultural sector and the marketed outputs. As the same time, the farmers are bound to sell their outputs to the person who can deliver the inputs, especially when the inputs are credits. On the other hand, some who deliver on credit also sell urban products to the farmers.

The urban sector mainly supply their inputs wholesale to the shopkeepers in the hinterland villages and other small-scale service centres. Therefore urban traders do not sell more inputs to farmers on credit than village shopkeepers.

In the NCP there can be seen many rural-urban consumption linkages. But, most of the linkages have not reached the expected benefits, because they are of an indirect nature that causes inefficiency in farmers.